FORM PTO-1390 (REV 12-29-99)

U S DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371

ATTORNEY'S DOCKET NUMBER
Filed: May 1, 2000
306.38504X00

U S APPLICATION NO (If known, see 37 CFR 1.5)
09/530415

INTERNATIONAL APPLICATION NO.	INTERNATIONAL FILING DATE	PRIORITY DATE CLAIMED
PCT/EP98/06274 6724	22 October 1998 (22.10.98)	31 October 1997 (31.10.97)

TITLE OF INVENTION ELECTRICALLY CONDUCTIVE COVERING PAINT

APPLICANT(S) FOR DO/EO/US HERRMAN, Karl; KARL, Wolf-Rudiger; PIPPLIES, Klaus; SCHULTE

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. [X] This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. [ ] This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. [ ] This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).
4. [X] A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5. [X] A copy of the International Application as filed (35 U.S.C. 371(c)(2))
   a. [ ] is transmitted herewith (required only if not transmitted by the International Bureau).
   b. [X] has been transmitted by the International Bureau.
   c. [ ] is not required, as the application was filed in the United States Receiving Office (RO/US).
6. [ ] A translation of the International Application into English (35 U.S.C. 371(c)(2)).
7. [ ] Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
   a. [ ] are transmitted herewith (required only if not transmitted by the International Bureau).
   b. [ ] have been transmitted by the International Bureau.
   c. [ ] have not been made; however, the time limit for making such amendments has NOT expired.
   d. [ ] have not been made and will not be made.
8. [ ] A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. [ ] An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. [ ] A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11. to 16. below concern document(s) or information included:

11. [ ] An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. [ ] An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. [ ] A FIRST preliminary amendment.
    [ ] A SECOND or SUBSEQUENT preliminary amendment.
14. [ ] A substitute specification.
15. [X] A change of power of attorney and/or address letter.
16. [X] Other items or information:

PCT Request Form
International Publication No. W099/23178

U.S. APPLICATION NO. (if known, see 37 CFR 1.5)	INTERNATIONAL APPLICATION NO	ATTORNEY'S DOCKET NUMBER
09/530415	PCT/EP98/06274	306.38504X00

17. [X] The following fees are submitted:

BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)) :

		CALCULATIONS PTO USE ONLY
Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO	**$970.00**	
International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO	**$840.00**	
International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO	**$690.00**	
International preliminary examination fee paid to USPTO (37 CFR 1.482) but all claims did not satisfy provisions of PCT Article 33(1)-(4)	**$670.00**	
International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(1)-(4)	**$96.00**	

ENTER APPROPRIATE BASIC FEE AMOUNT =				$	840.00
Surcharge of **$130.00** for furnishing the oath or declaration later than [ ] 20 [ ] 30 months from the earliest claimed priority date (37 CFR 1.492(e)).				$	0.00
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total claims	15 - 20 =	0	X **$18.00**	$	0.00
Independent claims	1 - 3 =	0	X **$78.00**	$	0.00
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ **$260.00**	$	0.00
TOTAL OF ABOVE CALCULATIONS =				$	840.00
Reduction of 1/2 for filing by small entity, if applicable. A Small Entity Statement must also by filed (Note 37 CFR 1.9, 1.27, 1.28).				$	0.00
SUBTOTAL =				$	840.00
Processing fee of **$130.00** for furnishing the English translation later than [ ] 20 [ ] 30 months from the earliest claimed priority date (37 CFR 1.492(f)). +				$	0.00
TOTAL NATIONAL FEE =				$	840.00
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). **$40.00** per property +				$	0.00
TOTAL FEES ENCLOSED =				$	840.00
				Amount to be refunded:	$
				charged:	$

a. [X] A check in the amount of $840.00 to cover the above fees is enclosed.

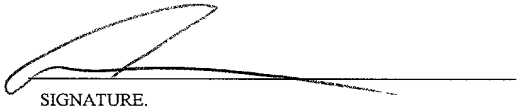
b. [ ] Please charge my Deposit Account No. _____ in the amount of $_____ to cover the above fees. A duplicate copy of this sheet is enclosed.

c. [X] The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 01-2135. A duplicate copy of this sheet is enclosed.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

Alan E. Schiavelli
Antonelli,Terry, Stout & Kraus, LLP
1300 North Seventeenth Street
Suite 1800
Arlington, VA 22209
703-312-6600



SIGNATURE.

Alan E. Schiavelli
NAME

32,087
REGISTRATION NUMBER

306.38504X00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: HERRMAN et al

Serial No.: 09/530,415

Filed: May 1, 2000

For: Electrically Conductive Covering Paint

ATTN: Application Division

PRELIMINARY AMENDMENT

Assistant Commissioner
for Patents
Washington, D.C. 20231

September 20, 2001

Sir:

The following amendment are respectfully requested prior to examination of the subject application.

IN THE ABSTRACT:

Please add the following abstract of the disclosure to the application.

ABSTRACT OF THE DISCLOSURE

A polymer-based lacquer paint, characterized in that in addition to the lacquer paint constituents which are usual per se, it contains suitable conductive additives, by which the lacquer paint is provided with anti-static properties.

REMARK

By this amendment, applicant has added by abstract of the disclosure.

It is respectfully requested that any shortage in the fee be charged to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 306.38504X00).

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP

Alan E. Schiavelli
Registration No. 32,087

AES/jla
(703) 312-6600
Attachment

ELECTRICALLY CONDUCTIVE COATING LACQUER PAINTS

Polymer-based lacquer paints, which are used in particular for coating plastics surfaces, are the subject of the present invention.

When electrically uncharged substances having different dielectric constants touch, electrons migrate out of the one substance into the other. If the two substances are separated quickly, the charge displacement obtained in this way is retained and can lead to the development of high electrostatic potentials. This phenomenon is often to be observed in plastics, which, because of their insulating properties, can be relatively easily electrostatically charged. The sudden discharge of such electrostatically charged plastics can become a source of danger in certain cases. It is therefore generally customary in those cases in which electrostatically charged plastics can represent a source of danger to provide a so-called anti-static provision for the plastics surfaces in order to allow electrostatic charges to flow off in a controlled manner and thus to be able to prevent effectively the danger of sudden discharges.

In use, other disadvantage are also not infrequently caused by the insulating properties of plastics. Because of their insulating properties, for example, it is not possible simply to lacquer paint them by means of the so-called electrostatic coating. This has a disadvantageous effect particularly if insulating plastics are to be combined together with electrically conductive materials and electrostatically lacquer painted together in one working step, a process which is entirely usual in the automobile industry and its suppliers and in which, for example, plastics bumpers are connected to metal body portions. However,

in order to be able to use the technique of electrostatic lacquer painting, the treatment of plastics surfaces with a black or dark grey electrically conductive undercoat has therefore been hitherto a prerequisite. Plastics surfaces equipped in this way were then able to be electrostatically over-lacquer painted with the actual coating lacquer paint.

The object of the present invention has therefore been to make available lacquer paints which eliminate the disadvantages which occur in the case of the lacquer painting of plastics surfaces. A further object of the present invention has consisted in providing coating lacquer paints with anti-static properties in order to be able to dispense with the electrically conductive undercoat.

Apart from this, the lacquer paints in accordance with the invention are to satisfy demands with respect to mechanical and optical properties, corrosion protection and weather resistance.

The object has been achieved in accordance with the invention by the features of the main claim. Preferred developments are characterised in the sub-claims.

The invention proposes providing lacquer paints which are known per se with anti-static properties by means of the addition of suitable additives. Soots with conductivity, metal powders, mica flakes with a conductive coating, fine-particle SnO_2 whether surface-treated or non-surface-treated, semiconductor-doped TiO_2, semiconductor-doped $BaSO_4$ and a series of organic additives are counted among the additives to be used in accordance with the invention.

As a result of the solution in accordance with the invention, there are placed in the lacquer paint sufficiently conductive particles which form in the lacquer paint matrix a network of electrically

conductive paths, by way of which electric charges can flow away in a targeted manner (percolation theory). The amount of conductive particles in the polymer matrix of the lacquer paint that is required for the anti-static equipping and the resulting conductivity of the compound system are determined by the percolation theory.

In a preferred embodiment, the combination with suitable other fillers/pigments which are non-conductive is provided. As a result of this measure, the so-called extender effect is exploited, without losses resulting in the conductivity of the compound system. This extender effect makes it possible to reduce the amount of conductive additives that is necessary per se. A surface resistance of 10^2 to 10^9 Ohm that fulfils the criterion for anti-static coatings usually develops in the case of a pigmentation with the conductive additives and/or the non-conductive fillers/pigments of 5-35% 'PVC' (pigment volume concentration).

As a result of the suitable choice and combination of the individual non-conductive fillers/pigments and the electrically conductive additives, practically any polymer-based lacquer paint can be provided with anti-static properties. In this way, a suitable lacquer paint can be formulated in accordance with the invention for any decorative design.

In order to optimise the lacquer paints in accordance with the invention, in certain cases provision can be made for controlled flocculation with comparatively less thermodynamically favourable solvents or with suitable additives which are known per se to the skilled person. In most cases, a comparatively small degree of filling, leads to improvements in all of the above-mentioned criteria, while the desired anti-static property is retained.

In order to ensure the efficiency of the electrically conductive additives, a sufficient dispersal of both the electrically conductive additives and of the non-conductive fillers/pigments is necessary; the manner in which this is to be achieved is known per se to the skilled person.

The addition of 0.05 - 20.0% 'PVC' rutile-based transparent TiO_2 having a crystallite size of 5 - 50 nm effects non-angle-dependent (colour-tone effects) and angle-dependent (frost effect) changes. At the same time, it was possible to achieve a certain stability against UV-A and UV-B radiation by means of this addition of transparent TiO_2.

The TiO_2 particles to be used can additionally also have an inorganic doping. In this connection, the doping of the TiO_2 particles with aluminium oxide or zirconium oxide changes the weathering resistance of the lacquer paint in accordance with the invention in an advantageous way. In order to improve further the wettability of the TiO_2 particles and the dispersibility that is linked therewith, an organic after treatment can be provided in accordance with the invention.

Furthermore, the lacquer paintes in accordance with the invention, which are based on water-dilutable or solvent-containing binding agents, such as polyester resins, alkyd resins, acrylic resins, epoxy resins, for example, can preferentially be provided with chromophore pigments (for example TiO_2, organic and inorganic coloured pigments), with effect pigments (for example pearl-lustre pigments) or further fillers, such as $BaSO_4$, for example. The selection criteria are directed towards the properties required in later use. The hardening of the lacquer paint systems is predetermined by the choice of resin and of the additives which are used. A hardening by UV or EB radiation can likewise be carried out successfully in

the case of a suitable choice of the additives. In order to optimise the lacquer paint compositions with respect to mechanical or optical properties, in order to improve the rheology, etc, commonly employed additives can also be used in the formulations which form the basis of the invention. When choosing the additives, it is only necessary to take care that the network of electrically conductive paths is not interrupted, because the surface resistance of the lacquer paint would be increased drastically again as a result of this (percolation theory).

The lacquer paintes in accordance with the invention can be prepared according to methods which are known per se.

It is particularly advantageous that, as a result of the solution in accordance with the invention, a working step can be omitted when treating plastics surfaces, as a result of which, on the one hand, considerable costs are saved, and also, on the other hand, sources of error in the process are ruled out. Furthermore, the solution in accordance with the invention also relieves the strain on the environment, because, by dispensing with the conductive primer (electrostatic undercoat), one no longer wastes the solvents which are generally used.

In order to demonstrate the suitability of the lacquer paints formulated in accordance with the invention, silver, green and red metallic lacquer paints based on cellulose acetate butyrate/polyester/melamine resin were each provided with anti-static properties by means of a transparent, electrically conductive $BaSO_4$. The composition for the silver metallic lacquer paint formulated in accordance with the invention is given by way of example:

cellulose acetatobutyrate (15%)	32.0% by weight
polyester (65%)	16.0% by weight

melamine resin	5.5% by weight
aluminium pigment	2.4% by weight
conductive $BaSO_4$	16.1% by weight
solvents and lacquer paint auxiliaries	28.0% by weight

Electrically conductive $BaSO_4$ is known per se from EP-A-0 459 552. It consists in principle of $BaSO_4$ particles which are sheathed with a layer of Sb_2O_3-doped SnO_2. Sacon P 401 can be used, for example. The plastics surfaces treated with these metallic lacquer paints in accordance with the invention were first of all examined purely visually. No significant differences from plastic surfaces treated with known metallic lacquer paints could be established. The lacquer paints were then measured with a spectrophotometer at D65/10°. Here as well, only small differences in the colorimetric data emerged. The maximum Delt E-values were 1.30.

A further example of a lacquer paint in accordance with the invention is the following formulation of a light grey electrically conductive base coat based on polyester/ melamine resin.

Dynapol H 703	26.7% by weight
Maprenal MF 650	7.9% by weight
conductive $BaSO_4$	29.4% by weight
Hombitan R 522	11.0% by weight
xylene/MPA 2/1	21.0% by weight
Modaflow (5% in Solvesso 100)	4.0% by weight
Surface resistance	10^4 Ohm

A further advantageous embodiment of the invention provides for the so-called controlled flocculation. This controlled flocculation can be generated by a suitable choice of special additives and solvents which are thermodynamically unfavourable for the system.

Even with this, the anti-static property of the lacquer paint in accordance with the invention is not lost. By way of example, tests were carried out in polyester-resin systems, acrylate-resin systems and epoxy-resin systems.

a) Acrylate system

	base [% by weight]	mod. [% by weight]
Macrynal SM 540	19.2	24.6
IPDI-B-1370	14.8	19.0
Irgastab DBTL	0.02	0.01
diethylamine	0.13	0.11
silicone oil L 050	0.33	0.01
Solvesso 100	1.85	-
xylene	16.3	-
MPA	17.1	1.55
butanol	-	21.0
i-propanol	-	7.1
conductive $BaSO_4$	30.2	24.7
Anti Terra 204	-	1.9
surface resistance	10^6	10^6 Ohm

b) polyester-resin system

	base [% by weight]	mod. [% by weight]
Dynapol LH 812	34.0	40.2
Cymel 303	5.11	6.03
Vestorit Catalyst 1203	1.39	1.64
Solvesso 200	4.6	-
xylene	8.5	6.3
MPA	7.8	-
butanol	-	10.0
i-propanol	-	5.5
conductive $BaSO_4$	38.5	28.8
Anti Terra 204	-	1.61
surface resistance	10^5 Ohm	10^5 Ohm

c) epoxy-resin system

	base [% by weight]	mod. [% by weight]
Epikote 1007	19.5	23.4
butanol	17.1	21.4
xylene	17.1	16.8
MIBK	2.8	3.4
Beetle BE 681	7.8	9.5
conductive $BaSO_4$	35.7	22.8
Anti Terra 204	-	1.9
Byk ES 80	-	0.9
surface resistance	10^4 Ohm	10^4 Ohm

Claims

1. Polymer-based lacquer paint, characterised in that in addition to the lacquer paint constituents which are usual per se, it contains suitable conductive additives, by which the lacquer paint is provided with anti-static properties.

2. Lacquer paint according to claim 1, characterised in that the conductive additives are chosen from soots having conductivity, metal powders, conductively coated mica flakes, fine-particle SnO_2 which is surface-treated or is not surface-treated, semiconductor-doped TiO_2, semiconductor-doped $BaSO_4$ and/or organic additives.

3. Lacquer paint according to claim 1 or 2, characterised in that the amount of conductive additives in the polymer matrix of the lacquer paint that is required for the anti-static provision and the resulting conductivity of the overall system are determined by the percolation theory.

4. Lacquer paint according to one or more of claims 1 to 3, characterised in that it contains a combination of conductive additives in accordance with claim 2 with non-conductive fillers/pigments.

5. Lacquer paint according to one or more of claims 1 to 4, characterised in that is has a surface resistance of 10^2 to 10^9 Ohm.

6. Lacquer paint according to one or more of claims 1 to 5, characterised in that it contains 5 to 35% 'PVC' of conductive additives and/or non-conductive fillers/pigments.

7. Lacquer paint according to one or more of claims 1 to 6, characterised in that electrically conductive $BaSO_4$ is used as the electrically conductive additive.

8. Lacquer paint according to claim 7, characterised in that $BaSO_4$ particles which are sheathed

with a layer of Sb_2O_3-doped SnO_2 are used as the electrically conductive $BaSO_4$.

9. Lacquer paint according to one or more of claims 1 to 6, characterised in that rutile-based transparent TiO_2 is used as the electrically conductive added substance.

10. Lacquer paint according to claim 9, characterised in that 0.05 - 20.0% 'PVC' transparent TiO_2, preferably with a crystallite size of 5 - 50 nm, is used.

11. Lacquer paint according to claim 9 or 10, characterised in that the TiO_2 particles to be used have an inorganic doping, preferably of aluminum oxide or zirconium oxide.

12. Lacquer paint according to one or more of claims 1 to 11, characterised in that cellulose acetate butyrate/polyester/melamine resin is used as the polymer base.

13. Lacquer paint according to one or more of claims 1 to 12, characterised in that a controlled flocculation is generated.

14. Lacquer paint according to claim 13, characterised in that the controlled flocculation is generated by additives which are known per se and/or the addition of comparatively less thermodynamically favourable solvents.

15. Use of a lacquer paint in accordance with one or more of claims 1 to 14 for providing plastics with anti-static properties.

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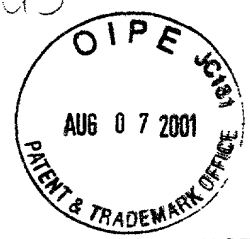


Attorney's Docket No.: 306.38504X00

DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

As a below named inventor, I hereby declare that: my residence, post office address and country of citizenship are as stated below, next to my name; I believe I am the original, first, and sole inventor (if only one name is listed below) or an original, first, and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

ELECTRICALLY CONDUCTIVE COVERING PAINT

the specification of which

___ is attached hereto.

_X_ was filed on October 22, 1998 as
United States Application Number
or PCT International Application Number PCT/EP98/06724
and was amended on _____.
(if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment referred to above. I acknowledge the duty to disclose all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d), of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)			Priority Claimed	
197 48 266.0 (Number)	Germany (Country)	31/October/1997 (Day/Month/Year Filed)	X Yes	___ No
198 34 284.5 (Number)	Germany (Country)	30/July/1998 (Day/Month/Year Filed)	X Yes	___ No

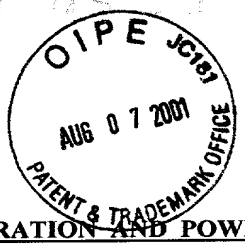
I hereby claim the benefit under title 35, United States Code, Section 119(e) of any United States provisional application(s) listed below

_____ _____
(Application Number) Filing Date

_____ _____
(Application Number) Filing Date

I hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, Section 112, I acknowledge the duty to disclose all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

02 07259 US



Attorney's Docket No.: 306.38504X00

DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

As a below named inventor, I hereby declare that: my residence, post office address and country of citizenship are as stated below, next to my name; I believe I am the original, first, and sole inventor (if only one name is listed below) or an original, first, and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

ELECTRICALLY CONDUCTIVE COVERING PAINT

the specification of which

___ is attached hereto.

_X_ was filed on October 22, 1998 as
United States Application Number
or PCT International Application Number PCT/EP98/06724
and was amended on _____.
(if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment referred to above. I acknowledge the duty to disclose all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d), of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

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198 34 284.5 (Number)	Germany (Country)	30/July/1998 (Day/Month/Year Filed)	X Yes	___ No

I hereby claim the benefit under title 35, United States Code, Section 119(e) of any United States provisional application(s) listed below

_____ _____
(Application Number) Filing Date

_____ _____
(Application Number) Filing Date

I hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, Section 112, I acknowledge the duty to disclose all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

02 97058 US -2

(Application Number)	Filing Date	(Status -- patented, pending, abandoned)
(Application Number)	Filing Date	(Status -- patented, pending, abandoned)

I hereby appoint: Donald R. Antonelli, Reg. No. 20,296; Melvin Kraus, Reg. No. 22,466; William I. Solomon, Reg. No. 28,565; Gregory E. Montone, Reg. No. 28,141; Ronald J. Shore, Reg. No. 28,577; Donald E. Stout, Reg. No. 26,422; Alan E. Schiavelli, Reg. No. 32,087; James N. Dresser, Reg. No. 22,973; Carl I. Brundidge, Reg. No. 29,621; Paul J. Skwierawski, Reg. No. 32,173; and Robert M. Bauer, Reg. No. 34,487, my attorneys; of ANTONELLI, TERRY, STOUT & KRAUS, LLP with offices located at 1300 North Seventeenth Street, Suite 1800, Arlington, Virginia 22209, telephone: (703) 312-6600, fax: (703) 312-6666; with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith.

Send all correspondence to:

ANTONELLI, TERRY, STOUT & KRAUS, LLP
1300 North Seventeenth Street
Suite 1800
Arlington, VA. 22209

Direct all telephone calls and faxes to:

TEL: (703) 312-6600
FAX: (703) 312-6666

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of Sole/First Inventor HERRMANN, Karl

Inventor's Signature _____ Date _____

Residence Schambach, Germany (City, State) Citizenship Germany (Country)

Post Office Address Hauptstrasse 16, D-91757 Schambach, Germany

Full Name of Second/Joint Inventor KARL, Wolf-Rudiger
By his heir, Ms. Verena Karl

Inventor's Signature X [signature] Date X 26.09.2001

Residence Duisburg, Germany (City, State) Citizenship Germany (Country)

Post Office Address Ehrenstrasse 55, D-47198 Duisburg, Germany

02 a2058 US -2

Full Name of Third/Joint Inventor PIPPLIES, Klaus

Inventor's Signature _____ Date _____

Residence Moers, Germany (City, State) Citizenship Germany (Country)

Post Office Address Asberger Strasse 66, D-47441 Moers, Germany

Full Name of Fourth/Joint Inventor SCHULTE, Klaus

Inventor's Signature _____ Date _____

Residence Alpen, Germany (City, State) Citizenship Germany (Country)

Post Office Address Heidestrasse 17, D-46519 Alpen, Germany

Full Name of Fifth/Joint Inventor _____

Inventor's Signature _____ Date _____

Residence _____ (City, State) Citizenship _____ (Country)

Post Office Address _____

Full Name of Sixth/Joint Inventor _____

Inventor's Signature _____ Date _____

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Post Office Address _____

Full Name of Seventh/Joint Inventor _____

Inventor's Signature _____ Date _____

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Post Office Address _____

OZ 97058 US

Attorney's Docket No.: 306.38504X00

DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

As a below named inventor, I hereby declare that: my residence, post office address and country of citizenship are as stated below, next to my name; I believe I am the original, first, and sole inventor (if only one name is listed below) or an original, first, and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

ELECTRICALLY CONDUCTIVE COVERING PAINT

the specification of which

___ is attached hereto.

_X_ was filed on October 22, 1998 as
United States Application Number
or PCT International Application Number PCT/EP98/06724
and was amended on _____.
(if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment referred to above. I acknowledge the duty to disclose all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d), of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)			Priority Claimed	
197 48 266.0 (Number)	Germany (Country)	31/October/1997 (Day/Month/Year Filed)	X Yes	___ No
198 34 284.5 (Number)	Germany (Country)	30/July/1998 (Day/Month/Year Filed)	X Yes	___ No

I hereby claim the benefit under title 35, United States Code, Section 119(e) of any United States provisional application(s) listed below

_____ _____
(Application Number) Filing Date

_____ _____
(Application Number) Filing Date

I hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, Section 112, I acknowledge the duty to disclose all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

(Application Number)	Filing Date	(Status -- patented, pending, abandoned)
(Application Number)	Filing Date	(Status -- patented, pending, abandoned)

I hereby appoint: Donald R. Antonelli, Reg. No. 20,296; Melvin Kraus, Reg. No. 22,466; William I. Solomon, Reg. No. 28,565; Gregory E. Montone, Reg. No. 28,141; Ronald J. Shore, Reg. No. 28,577; Donald E. Stout, Reg. No. 26,422; Alan E. Schiavelli, Reg. No. 32,087; James N. Dresser, Reg. No. 22,973; Carl I. Brundidge, Reg. No. 29,621; Paul J. Skwierawski, Reg. No. 32,173; and Robert M. Bauer, Reg. No. 34,487, my attorneys; of ANTONELLI, TERRY, STOUT & KRAUS, LLP with offices located at 1300 North Seventeenth Street, Suite 1800, Arlington, Virginia 22209, telephone: (703) 312-6600, fax: (703) 312-6666; with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith.

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FAX: (703) 312-6666

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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(Application Number)	Filing Date	(Status -- patented, pending, abandoned)
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